INFILTRATION / INFLOW

BUILDING INSPECTION PROGRAM

HELP REDUCE SEWER BACKUPS, OVERFLOWS AND WASTEWATER TREATMENT COSTS

COMPONENTS OF WASTEWATER FLOW

• Wastewater is used water that can be disposed through your plumbing fixtures, including showers, sinks, dishwashers, washing machines and toilets. Every drop of water that gets sent through your plumbing costs money to treat!

• Infiltration is clean water from below the ground (known as groundwater) that comes in through broken pipes and manholes.

• Inflow is stormwater that enters the town sewer system through piping that mistakenly directs stormwater to the sewer system instead of the drainage system. Basement sump pumps are a source of inflow and should not discharge into the town sewer system.

WHY SHOULD YOU HELP? EFFECTS OF INFLOW AND INFILTRATION

Sewer pipes and pump stations are designed specifically for wastewater flow of the community, not stormwater. When excess flow from inflow and infiltration occurs, it overloads the system and can:

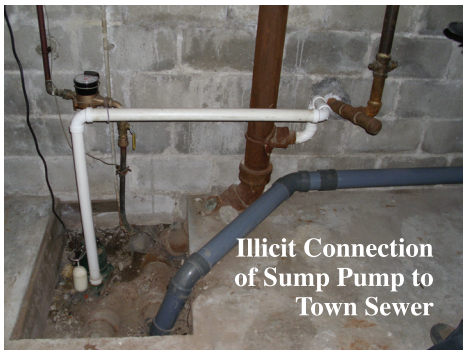
- Back up into private residences and businesses (costly property damage!)
- Spill to environmentally sensitive areas and properties
- Impose hazards to humans and wildlife
- Increase user costs due to unnecessary transportation and treatment of "clean" water

DEDHAM INFLOW AND INFILTRATION PROGRAM

Since 2007, the Town of Dedham has been performing a comprehensive infiltration and inflow removal program. This program has decreased the Town of Dedham's MWRA flow share from 1.77% in 2007 to 1.13% in 2014. This 36% decrease in flow share has saved the town approximately $9.3 million dollars in MWRA sewer assessments over the past 8 years, allowing your sewer rates to stay relatively flat.

To date through sewer inspections, smoke testing and municipal building inspections, the estimated infiltration and inflow REMOVED by the town is:

• 3.8 million gallons per day of infiltration
• 767,000 gallons per day of public inflow

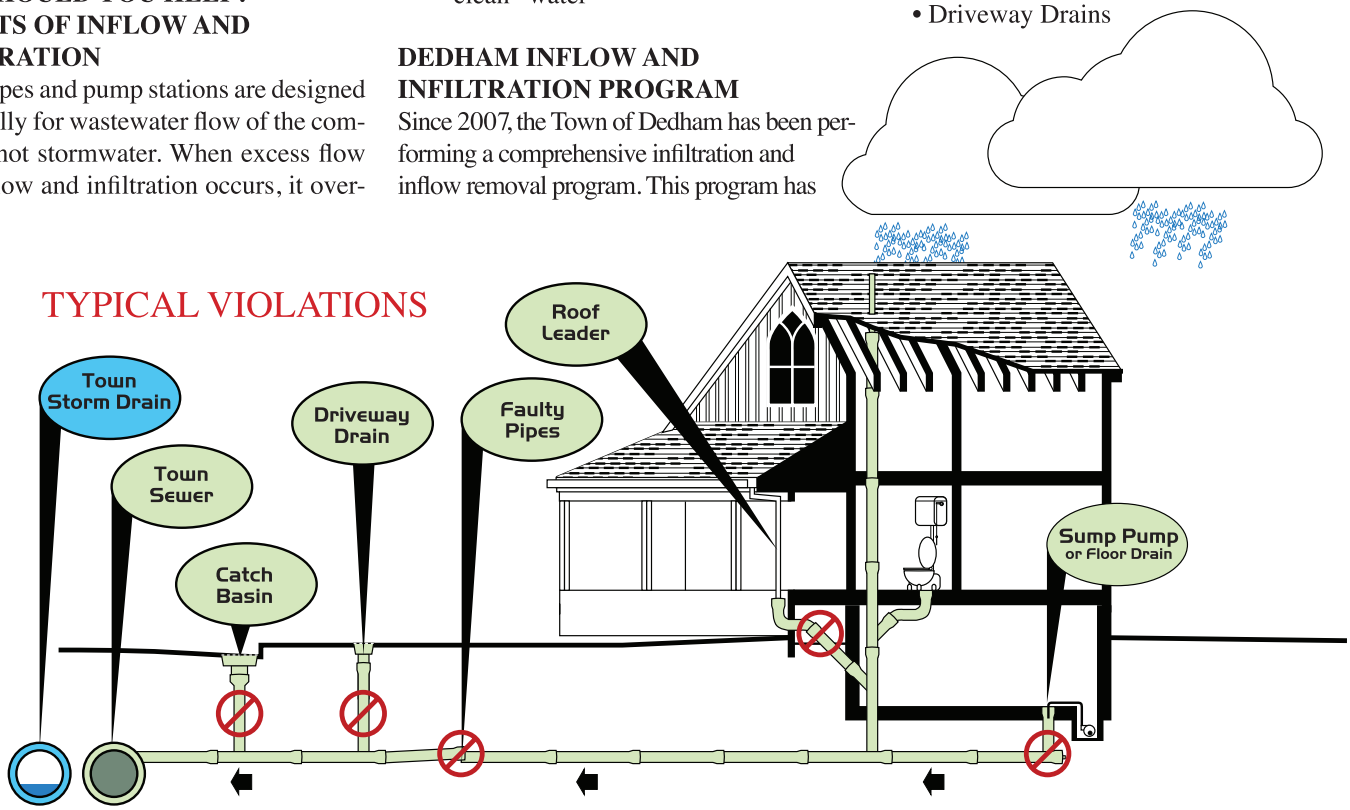


ILLICIT CONNECTIONS

An illicit sewer connection is a stormwater connection to the town sewer system. Typical illicit sewer connections include:

- Basement Sump Pumps (Most Common)
- Roof Leaders/Downspouts
- Foundation/Cellar French Drains
- Driveway Drains

TYPICAL VIOLATIONS



When storm events occur, these devices convey "clean" stormwater runoff into the town sewer system resulting in increased flows and unnecessary treatment of "clean" water. The excess flows can also occur during non-storm events. Sump pumps or drains located below the water table will convey "clean" water to the sanitary sewer system and are typical in areas with high groundwater.

While progress has been made, it is estimated that approximately 7.2 million gallons per day of peak design storm inflow remains in the sewer system.

The Town of Dedham will begin to take inventory of all private inflow sources that discharge to the town sewer system through the upcoming building inspection program.

DID YOU KNOW?

• One sump pump can contribute up to 14,400 gallons of water per day. That's enough to fill an average sized swimming pool EVERY DAY! It costs an estimated $40 per sump pump per day when running. If ONE sump pump constantly runs all year it would cost the town approximately $14,600 PER YEAR!

• The MWRA estimates that up to 36% of all sewer flow in their system is infiltration and inflow or "clean" water that doesn't even need to be treated!

Jason L. Mammone, P.E.
DIRECTOR OF ENGINEERING